

**Movement - Space**

**Arp & Architecture**

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# ARP

Stiftung Arp e.V. Papers

## The Art of Hans Arp after 1945

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Volume 2

Edited by Jana Teuscher and Loretta Würtenberger



# Movement—Space

## Arp & Architecture

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### Dick van Gameren

The connection between Hans Arp's work and twentieth-century architecture is a rich and fascinating one. His oeuvre has an obvious spatial, three-dimensional quality that carries through to the works in two dimensions and expresses a strong sense of movement and growth. Many writers and researchers have analysed his emphasis on drawing inspiration from nature, and his nature-based works are seen as the basis of the unique and wonderful new visual language he introduced to twentieth-century art.

Likewise, nature has also provided many architects with the inspiration to develop new languages that mark a departure from established styles and formal approaches. Art Nouveau Architecture from around 1900 is an obvious example. Another example would be anthroposophic architecture, which is exemplified by Rudolf Steiner's Goetheanum. More recently, Enric Miralles' Gaudian structures of flowing lines that unify building and landscape, or Santiago Calatrava's biomorphic skeletal compositions embody this approach.

This essay does not attempt to give a full overview of all the possible connections and common sources of inspiration between Arp's work and twentieth-century architecture. Instead, it follows an associative line of thought, connecting Arp's work to that of his contemporaries in architecture.

This essay only touches upon Arp's biography and direct connections to architecture, in favour of exploring parallels between his ideas on how both nature and art are formed by a process of creation, and how similar processes of creation and thinking were explored in architecture. Finally, a project from our own practice Mecanoo Architecten shows the ongoing relevance and inspiration of Arp's art for today's architecture.

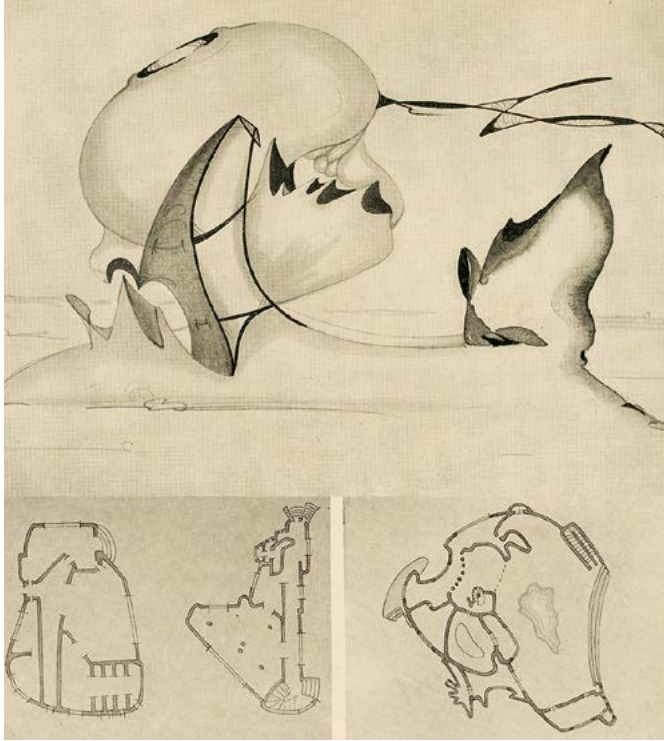


Fig. 1 Hermann Finsterlin: Drawings

## Growth and Expression

In her contribution to the 1948 publication *Arp, on my way*, part of Robert Motherwell's series *The Documents of Modern Art*, Carola Giedion-Welcker introduces the notion of "structural growth" as the defining characteristic of Arp's art. The idea of structural growth immediately connects to the architectural debate between formal and informal or organic architecture. The idea to which Giedion-Welcker refers may be considered the foundation of the work of a group of German architects, many of whom were exact contemporaries of Arp, and who investigated the idea of a growing, organic structure for their building designs in order to create a truly functional architecture. These ideas are embodied in the German expressionist architecture of the first two decades of the twentieth century, and continue after the First World War in the functionalist movement of the 1920s.

The beautiful sketches by Erich Mendelsohn and the extraordinary fantasy architecture of Hermann Finsterlin come to mind first. The Dutch magazine *Wendingen*, an avant-garde journal on architecture, art, and design that was published from 1918 through 1932, was very much focused on the work of Dutch and German expressionist architects. At the same time, it dedicated issues to forms found in nature such as crystals and shells. While it devoted an issue of 1920 to Mendelsohn's work, the third issue of 1924 is fully given over to Hermann Finsterlin's drawings of organically growing fantastic shapes, which he attempted to turn into architecture by augmenting them with rather awkward plans.

This attempt to create a new, expressive architecture took hold in the work of several architects who would become protagonists of German modernism. They began by designing structures with organic or biomorphic shapes. Over time, they augmented these fantasies with a rigorous concept of the necessity of functionality and the importance of movement in unifying the idea of organic growth and functionality, which also resulted in a new spatial experience.

Hugo Häring and Hans Scharoun both played crucial roles in developing this approach to design. They rejected the rigid geometry of modernists such as Walter Gropius and Mies van der Rohe. The organic shapes were not chosen for their merits as a formal language, but rather as an expression of the task the structure must perform.

The idea that structures could and should be based on organic principles was not new. Häring, who built little, was a prolific writer. His line of thought was clearly rooted in the nineteenth-century interest in Gothic architecture, an interest that had taken hold in the eighteenth century with Johann Wolfgang von Goethe's text *Von Deutscher Baukunst* (On German Architecture). In it, the famous writer described Strasbourg Cathedral (in Arp's hometown) as a primary example of "Northern" European architecture that was free of formal dogmas and implicitly functionalist. In contrast to the static classical architecture of the South, it was an architecture of growing structure. Häring clearly expressed his ideas in one of the few realised projects in his oeuvre: Gut Garkau in North Germany, designed in 1923. Most striking is the cowshed. An abstract organic shape, it is based on the functional analysis of the movement of cows in and out of the shed, and the daily processes of milking and feeding.

In contrast to Häring, Hans Scharoun realized a substantial oeuvre, which culminated in the post-war masterpieces of the Berlin Philharmonie and

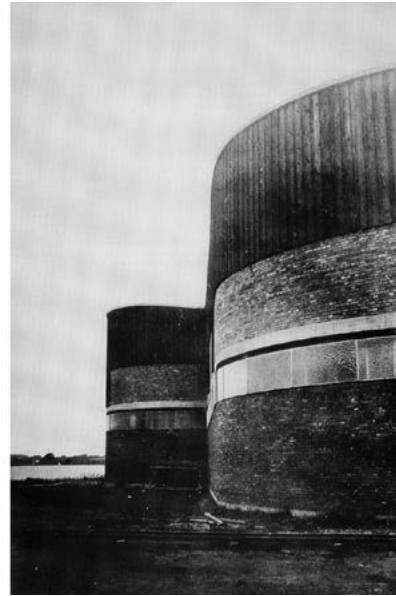
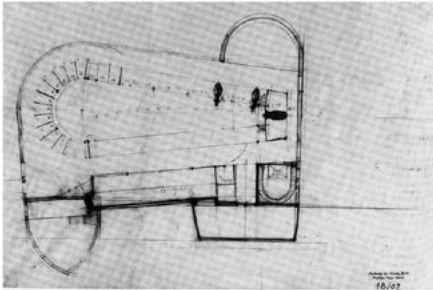


Fig. 2 Hugo Häring: Cowshed on Gut Garkau, near Lübeck, Germany, 1925

Staatsbibliothek. His early works exhibit a similar expression of organic structure and growth. His built design for a large collective residential building, which was part of the 1929 *Werkbundaustellung* in Breslau (now Wrocław in Poland), uses long sweeping curves to articulate the building as a continuous organism. Curves and angles, which express the program of small individual units and generous collective spaces, connect inside and outside and suggest infinity and the inseparability of built and unbuilt space.

In late, unfortunately unbuilt, studies made during the Nazi period, Häring designed a number of houses that express the idea of the organic form as the result of a purely functional analysis of the uses of and movement within each individual space in the house. He called the result of this design approach the *Leistungsform*, the performance form or shape. The plans are meticulously designed to accommodate all everyday activities in a house, culminating in powerful, beautifully shaped plans. The resulting drawings of plans for the houses are not only functional architectural drawings but also convincing pieces of art that combine precise details with strong flowing shapes, in surprising correspondence with Arp's "autonomous" art.

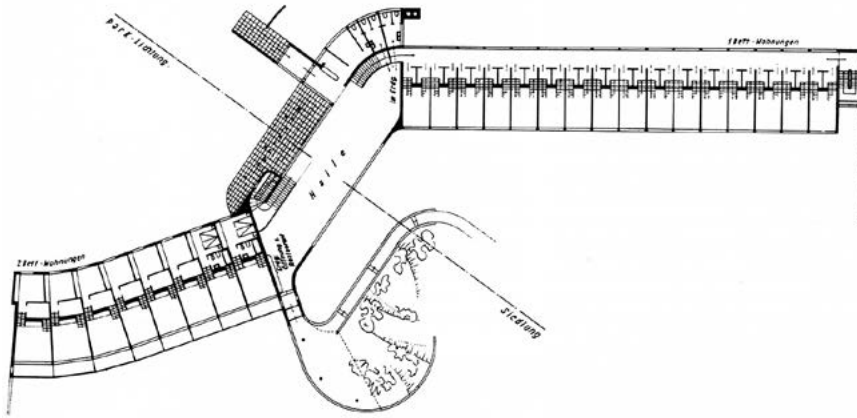


Fig. 3 Hans Scharoun: Apartment Building at the Wohnung und Werkraum Model Housing Estate in Breslau (now Wrocław), Poland, 1929

## Nature and Material

The combination of movement, space, and functionality in the work of Häring and Scharoun inevitably brings to mind Sigfried Giedion's seminal work *Space, Time and Architecture: The Growth of a New Tradition*, which was first published in 1941. In it Giedion analyzes the background and cultural roots of modern architecture and urban planning, showing how twentieth-century modernist architecture developed new spatial concepts based on notions of dynamic movement and continuous space—concepts that were nevertheless rooted in the centuries-old trajectory of architectural innovation and development. Giedion and his wife Carola Giedion-Welcker were very closely connected to Arp. Accordingly, Giedion mentions Arp's work several times, mainly in relation to Alvar Aalto, the great Finnish master of organic architecture. Häring is not present, while Scharoun is only briefly mentioned. This omission of the earlier simultaneous development of architecture and art based the idea of organic-like, structural growth, as visible in Arp's and Härings work, and that is so much at the core of Giedion's narrative, is rather striking. In the later expanded editions of his book, Giedion also mentioned his own collaboration with Arp when he spoke about the relationship between architecture, painting, and sculpture at the 1947 Bridgewater CIAM conference.

Giedion's book lends great importance to Le Corbusier. Looking at the work of this French-speaking Swiss architect, one can point to other intriguing parallels, although Giedion did not mention them. Hans Arp's wife Sophie Taeuber-Arp designed a house for the couple in Meudon (Clamart) near Paris. It is a striking building. Compared to the work of progressive architects then active in Paris, such as Le Corbusier or Robert Mallet-Stevens, the building is not very elegant in its design, with the windows rather crudely cut out of the box-like volume. It stands out, however, in the strong expression of the material. The facade is made of rough stones, put together in a wild, "natural" pattern. This "primitive" aesthetic marks a bold contrast to the avant-garde architecture of Le Corbusier, Mallet-Stevens, and other contemporary modernists. The house was designed and built in the same years as Le Corbusier's Villa Savoye, which was also near Paris. The iconic Villa Savoye is a completely abstracted composition, where all references to the actual structure and materials are concealed by a continuous, dematerializing layer of smooth and painted plasterwork.

Le Corbusier changed direction in a project of 1929, a summer house near

Toulon for H el ene De Mandrot, a well-known Swiss patron of art and architecture. Arp, Giedion, and Le Corbusier were all part of her circle of avant-gardists. Villa de Mandrot is the first building where he favors the expression of the material over the abstract plastered “skin” of the earlier houses. It is therefore a crucial turning point in his work and in modernist architecture in general. Two years later, Le Corbusier applied this concept in a more well-known work that is generally recognized as one of his masterworks: the Pavillon Suisse in Paris. The Pavillon was built in 1931 as housing for Swiss students at the Cit e Universitaire in Paris. Its plan is remarkable, and is very different from the plans he designed before, which were determined by a strict geometrical, almost Palladian order. Here everything suddenly falls apart into a collage, a juxtaposition of formal and organic shapes. In the drawings, the rough stone wall at the top of the ground floor is boldly expressed as an independent shape. With its beautiful curvilinear shape, the stair becomes another autonomous element. The same can be said of the pilotis, which has changed from Le Corbusier’s favourite “platonic” circular shape to a more complex form. And, to put even more emphasis on this new

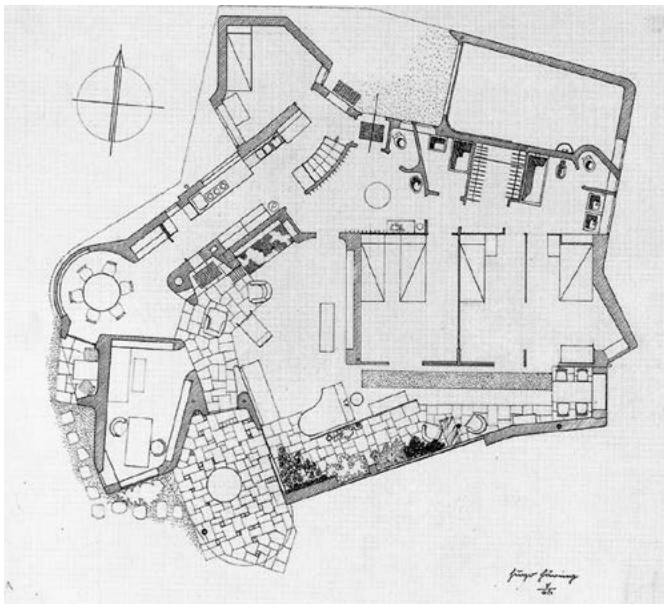


Fig. 4 Hugo H aring: Study for a House, 1946

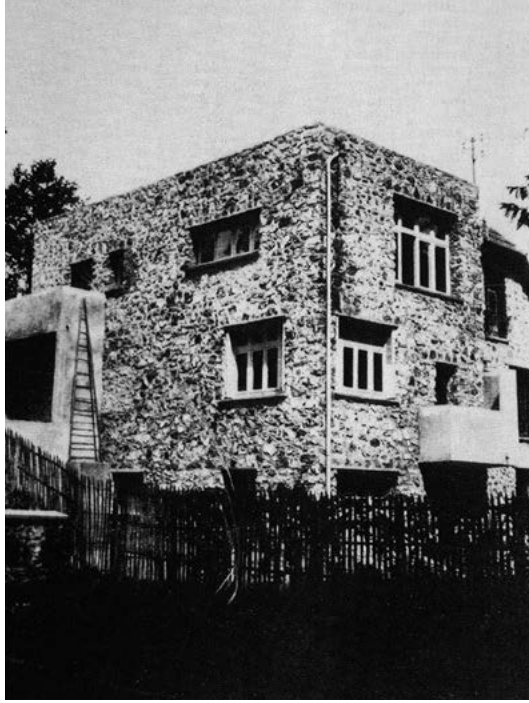


Fig. 5 Sophie Taeuber-Arp: The Arps' House in Clamart, France, 1929



Fig. 6 Le Corbusier: Villa de Mandrot, Le Pradet, near Toulon, France, 1929

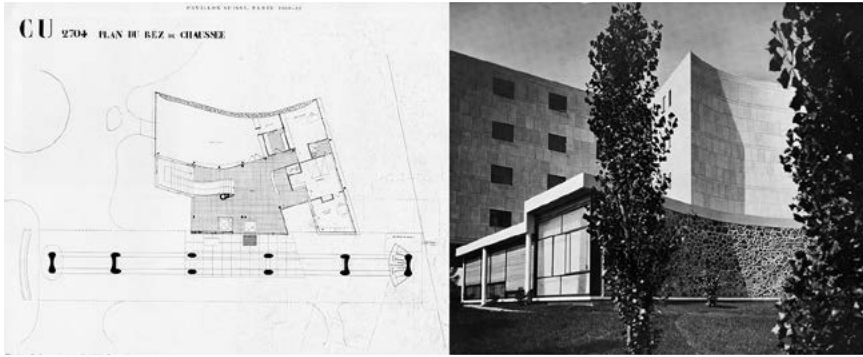


Fig. 7 Le Corbusier: Pavillon Suisse, Paris, 1930–31

orientation towards organic, natural forms, one of the interior walls of the ground floor bar is covered with abstract photographic images of nature.

The organic sculptural qualities found in the Pavillon Suisse became more and more dominant in his work, possibly finding their ultimate expression in the Chapel of Notre-Dame du Haut near Ronchamps (1950–1955). The shell-shaped roof, an amazing abstraction of nature, strongly resembles Arp's sculpture *Coquille (Shell)* (Giedion-Welcker 056) from 1938. In the chapel, all traces of Le Corbusier's cubist approach to architecture seem to have disappeared, having been replaced by a new biomorphic and material-based language. Plan, sections, and façade drawings all evoke the shapes of shells, crabs, and other elements from nature.

This approach is also carried out in the smaller details. A beautiful example is the famous water sprout or gargoyle that guides the rainwater from the roof to the earth. This element was designed by the Indian architect Arvind Talati who was one of Le Corbusier's assistants at the time. Talati, who was a brilliant draftsman, became the "biomorphic specialist" in the office and was therefore asked to draw the organic lines and shapes required by Le Corbusier for several projects. The gargoyle of Ronchamps could very well be inspired by the horns of an Indian cow.

The chapel near Ronchamps seemed to be an extreme departure from the principles of modernist architecture or functionalist architecture. Nikolaus Pevsner, the famous architectural historian and critic who was born in Germany but emigrated to England to escape the Nazi regime, coined the term

post-modern as early as the 1950s when discussing this work by Le Corbusier. At the same time, one could nevertheless argue that this sculptural biomorphism was one of the roots of modernism, and not a departure from it.

## Order and Free Form

Another example of architecture as a collage of organic, biomorphic shapes is the concrete roof landscape of the first Unité d'Habitation in Marseille, also by Le Corbusier in collaboration with the architect and painter Nadir Afonso. The residential project, which was completed in 1952, was designed as a rational structure that resembled a wine-rack in which the individual dwelling units are inserted as if they were wine bottles. It is crowned by a roof with ample space for play and sports. The concrete organic shapes on the roof echo the hills in the distance, which suggests infinity and establishes a direct link between architecture and nature.



Fig. 8 Le Corbusier: Plan of Notre-Dame du Haut, Chapel in Ronchamp, France, 1955



Fig. 9 Le Corbusier: Gargoyle on the Façade of Notre-Dame du Haut, Chapel in Ronchamp, France, 1955

This combination of seemingly irrational organic shapes with a rational functionalist architecture of a geometric grid of columns and floor slabs became a common language of architecture in the 1950s and 1960s. This new lingua franca of the post-war modernists can be seen in seminal works of post-war modernism all over the world. And, very often, the shapes chosen by architects to augment these rational main structures are directly related to what were by then the widely-acknowledged works of Hans Arp.

As examples one can look to the work of Denys Lasdun in London, whose design for Hallfield School echoes a branch with leaves. For the Dutch Johnson Wax factory in the village of Mijdrecht, the Dutch architect Huig Maaskant connected a very Arpian bird- or boomerang-shaped volume that served as the office to a factory shed built on the most basic grid plan. His design for the sea-pier in Scheveningen is another illustration of this approach. However, the most obvious and well-known example of all is most likely the work of Oscar Niemeyer. The exhibition buildings and their connecting covered gallery in São Paulo's Ibirapuera Park in Brazil of 1954 demonstrate the endless formal and spatial possibilities of the combination of grids and "free" forms.

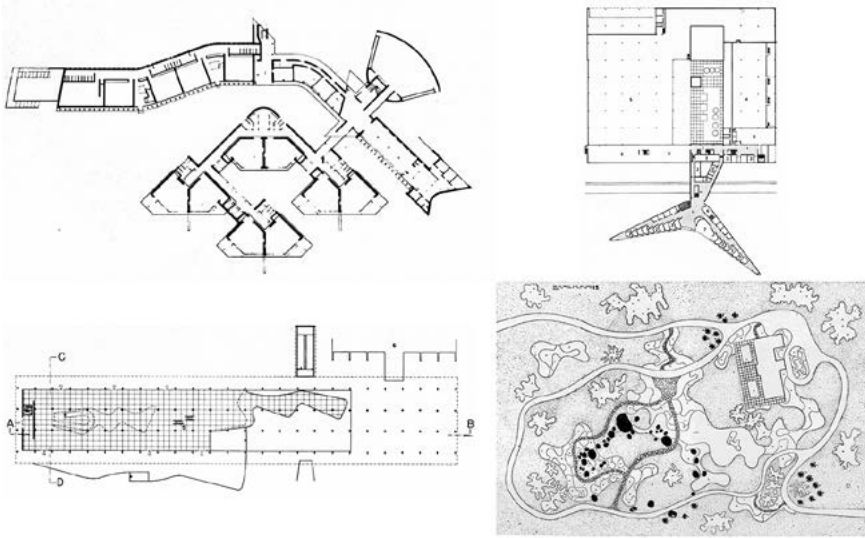


Fig. 10 Clockwise from the upper left: Denys Lasdun: Hallfield School, London, England, 1955; Huij Maaskant: Johnson Wax Office Building and Factory, Mijdrecht, Netherlands, 1962–1966; Roberto Burle Marx: Landscape Design at the Edmundo Cavanellas Residence, near Petropolis, Brazil, 1954; Oscar Niemeyer: Palace of Industry, Ibirapuera Park, São Paulo, Brazil, 1957

Niemeyer often worked together with the landscape architect Roberto Burle Marx, who extended Niemeyer’s curves and grids into the surrounding landscapes. His virtuosic landscape and garden designs turned Arpian shapes into wonderful interlocking and overlapping fields of plants and flowers. Here the quality of the endless space is at the fore.

### Mass and Void

The strong suggestion of the continuation of space beyond the borders of the actual project is one the most striking parallels between Arp’s art and modernist architecture. Another parallel exists in the ambiguous definition of space and mass. This is especially apparent in Arp’s “framed” work, on paper, in wood, or in other media. Here shapes can be read either as voids, empty spaces, or as masses, as volumes in an open space. The edge of the work seems arbitrary, and one imagines the shapes to continue and grow towards an invisible end.

The relation between void, or space, and mass is of course the essence of architecture, and the idea of ambiguity in this relationship is certainly not limited to twentieth-century modernism. It can be discovered in architecture from its very beginning, drawing long lines of evolution, discovery and re-discovery, and as such is comparable with the historic trajectory set out in Giedion's *Space, Time, and Architecture*.

The example of late medieval Scottish tower castles comes to mind. These piles of stone play a marvelous game with the ideas of space and mass, of movement and rest. For instance, in Elphinstone Tower, dating from 1508, all the ancillary spaces and most of all the connecting stairs and corridors are cut out of the enormous mass of the enveloping outer walls. Here the mass becomes space. Movement takes place in the mass, and the open space contained within the mass is left untouched, as a solid made out of emptiness.

Luigi Moretti, a master of mid-twentieth-century Italian architecture, made studies of the spatial character of Italian Baroque architecture, published in the magazine *Spazio* in the early 1950s. For his analysis, he made solid models of the interior space, thereby turning the void into mass and demonstrating the power of space as defined by the actual structure.

## **An Arpian Architecture**

The reversal or alternative reading of mass and space is the guiding aspect of the design by our architectural practice Mecanoo for a large cultural complex in Kaohsiung, the second-largest city of Taiwan. In 2006 we won a competition to build this cultural centre, which is located in a former military area that was to be transformed into a public park. The project opens in autumn 2018.

The presence of the park as the project's surrounding space and the existing trees informed the design concept. Specifically, we drew inspiration from the banyan trees, with their dense and wide crowns that provide shade and a place to catch a bit of a breeze and fresh air in Kaohsiung's hot and humid tropical climate. The section of the tree is the basis for the section of the building, creating a huge open space that is nevertheless covered and protective. The park continues through and under the building, obliterating any sense of border between open space and built space. The first schematic

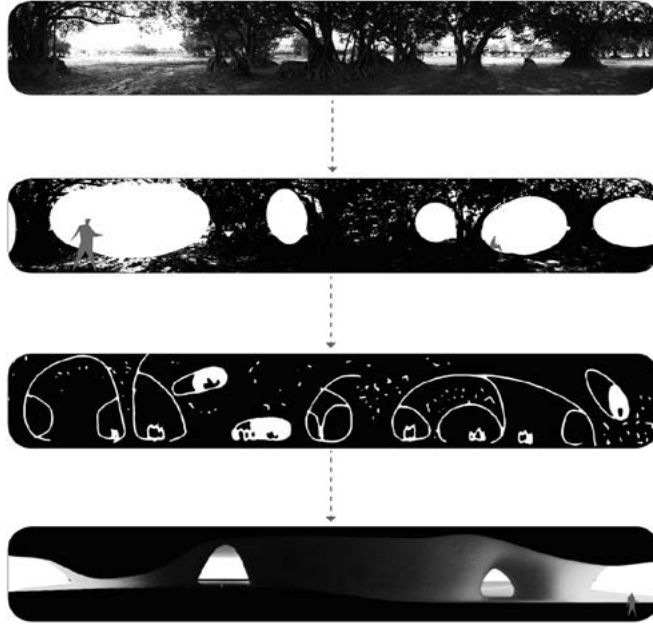


Fig. 11 Mecanoo: Concept for the Weiwuying Centre for the Arts, Kaohsiung, Taiwan

drawings of the plans and sections show a sculptural quality, which is determined by a continuity of space. The actual construction is fitted within a simple rectangle, a “picture” frame, that does not limit the open space, but rather emphasizes its continuity.

As an abstraction of the tree trunks and the crown of leaves, the mass also harbors open space as a series of foyers, concert halls, and theaters. The large open “in-between” or threshold public space will be open day and night. Wind can flow freely through the curving spaces, and daylight comes in through large openings in the vast roof. The undulating roof itself is also accessible, as it sweeps down to the ground level to create a large open-air theatre.

A model of the project can be made easily by carving out a piece of wood, or by three-dimensional printing. However, actual real size construction was extremely complex. After studying many options, it was decided to make the structure in steel, as a giant system of trunks, branches, and twigs, which would be clad by a skin of steel as well. This proved to be the best option, as

it could be made by the local ship-building industry that was in need of work. The partly conscious, partly unconscious parallels with Arp's work serves first and foremost as proof of the strong and unique spatial quality of his art. Arp was able to abstract nature within the confines of a sculpture—or even more strikingly in a two-dimensional work—in order to create a strong sense of unlimited space and free-flowing movement, of continuity, and of structural growth. Therein lies his lasting legacy and his invaluable inspiration for architecture.



Fig. 12 Mecanoo, Weiwei Centre for the Arts, Kaohsiung, Taiwan, 2018

References:

Frances Guy and Eric Robertson (eds.): *Arp, The Poetry of Forms*, exhibition catalogue, Kröller-Müller Museum, Otterlo 2017.

Barbara Costermans (ed.): *Hans Arp, De uitvinding van de vorm*, exhibition catalogue, Paleis voor de Schone Kunsten, Brussels 2004.

Hans Arp: *On My Way, Poetry and Essays 1912–1947* (ed. by Robert Motherwell), New York 1948 (*Documents of Modern Art*, Vol. 6).

Erich Mendelsohn, in: H.T. Wijdeveld (ed.): *Wendingen 10/1920*.

Hermann Finsterlin, in: H.T. Wijdeveld (ed.): *Wendingen 3/1924*.

Matthias Schirren (ed.): *Hugo Häring, Architekt des Neuen Bauens 1882–1958*, exhibition catalogue, Akademie der Künste, Berlin 2001.

Peter Blundell Jones: *Hugo Häring. The Organic versus the Geometric*, Stuttgart 1999.

Julius Posener: *From Schinkel to the Bauhaus*, London 1972 (*AA Papers*, Vol. 5).

Peter Blundell Jones: *Hans Scharoun. Eine Monographie*, Stuttgart 1980.

Sigfried Giedion: *Space, Time and Architecture. The Growth of a New Tradition (1941)*, Cambridge, Mass. 2008.

Willy Boesiger (ed.): *Le Corbusier und Pierre Jeanneret. Ihr gesamtes Werk von 1929–1934*, Zürich 1935.

Jean Petit and Pino Musi: *Ronchamp. Le Corbusier*, Lugano 1997.

*Le Corbusier: Ronchamp*, Stuttgart, 1957 (*Les Carnets de la Recherche Patiente*, Vol. 2).

William J.R. Curtiss: *Denys Lasdun. Architecture, City, Landscape*, London 1999.

Michelle Provoost: *Hugh Maaskant. Architect van de vooruitgang*, Rotterdam 2003.

Henrique E. Mindlin: *Modern Architecture in Brazil*, New York 1956.

David MacGibbon and Thomas Ross: *The Castellated and Domestic Architecture of Scotland from the Twelfth to the Eighteenth Century (1887)*, Vol. I, Edinburgh 1971.

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